QuadFoam® RetroSeal® 2.0 is “The No Heat Foam” Insulation System designed for the latest in application and equipment technology, the Graco Reactor E-8p®. QuadFoam® RetroSeal® 2.0 should be applied when ambient conditions and substrates are within 55 - 120 °F, with best results within 65 - 95 °F.

QuadFoam® RetroSeal® 2.0 is a 2.0 pcf material, Class 1 Fire rated and is excellent for insulating, air sealing and noise reduction. It contributes to providing a self-adhering, seamless building envelope that reduces air, dust, pollution, and pest infiltration. QuadFoam® RetroSeal® 2.0 is a medium density, 100% water-blown polyurethane spray foam.

This spray foam has been specially formulated to meet the intent of the International Code Council (ICC) building codes and is used primarily as a moisture/vapor barrier, air barrier and thermal insulation on above and below grade interior and exterior applications.

QuadFoam® RetroSeal® 2.0 insulates and airseals in one step for maximum energy conservation while minimizing the environmental impact during manufacturing and construction. Significantly reducing air leakage means QuadFoam® RetroSeal® 2.0 contributes to a healthier, quieter and more comfortable indoor environment, while reducing energy consumption and related greenhouse gas emissions by as much as 50%.

QuadFoam® RetroSeal® 2.0 is a combustible product and is therefore, consumed by flame, but will not sustain flame upon removal of the flame source. It leaves a charred foam residue. It will not melt or drip. QuadFoam® RetroSeal® 2.0 is subject to all National/State and County building codes regarding fire prevention. Requirements for Thermal Barrier and Ignition Barrier coverings must be met as per the applicable building code having jurisdiction.

### Spray Foam Insulation Advantages

- Reduces Energy Consumption
- Controls Air Infiltration
- Vapor Retarder
- Controls Moisture Infiltration
- Structural Properties
- High R value Per Inch
- Improves Indoor Air Quality
- Structural Properties
- Zero ODP

For proper use of this Quadrant Urethane Technologies insulating material or any polyurethane foam, please refer to the application information and any of the following codes or guidelines:

- API Fire Safety Guidelines for Use of Rigid Polyurethane and Polyisocyanurate Foam Insulation in Building Construction (AX230)

### Typical Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>2.0 pcf</td>
</tr>
<tr>
<td>R-value at 1 inch</td>
<td>5.1 (90 day aged)</td>
</tr>
<tr>
<td>Moisture Vapour</td>
<td>&lt;1.0 perms @ 1 in.</td>
</tr>
<tr>
<td>Dimensional Stability</td>
<td>&lt; 12%</td>
</tr>
<tr>
<td>Flammability</td>
<td>Flame Spread &lt; 25</td>
</tr>
<tr>
<td></td>
<td>Smoke Dev. &lt; 450</td>
</tr>
<tr>
<td>Viscosity</td>
<td>175 +/- - 50cps 9.2</td>
</tr>
<tr>
<td>W/G</td>
<td>+/- - 1 lb/gal</td>
</tr>
<tr>
<td>The fill weights</td>
<td>Part B - 40 pounds</td>
</tr>
<tr>
<td></td>
<td>Part A - 45 pounds</td>
</tr>
</tbody>
</table>

**NOTE:** The above values are average values obtained from laboratory experiments and should serve only as guidelines. Free rise core density should not be confused with overall density. Overall densities are always higher than free rise core densities and take into account skin formation, thickness of application, environmental conditions, etc.
QuadFoam® 2.0
APPLICATION INFORMATION

STORAGE AND USE OF CHEMICALS
Storage temperatures should be 65-85°F for several days before use, and should not exceed 90°F. Do not store in direct sunlight. Keep containers tightly closed when not in use. Shelf life is six months from date of manufacture when stored in original unopened containers at 50-85°F.

SAFE HANDLING OF LIQUID COMPONENTS
Avoid prolonged breathing of vapors. In case of chemical contact with eyes, flush with water for at least 15 minutes and get medical attention. For further information refer to “MDI-Based Polyurethane Foam Systems: Guidelines for Safe Handling and Disposal” publication AX-119 published by the Alliance for the Polyurethanes Industry, Arlington, VA.

EQUIPMENT AND COMPONENT RATIOS
The mix ratio is 1 to 1 by volume.

APPLICATION GUIDELINES
QuadFoam® RetroSeal® 2.0 is suitable for application to most construction materials including wood, masonry, concrete, and metal. All surfaces to be sprayed with foam should be clean, dry; and free of oil, greases, dew, mud or frost. Application temperature range of 55-120°F. Do not exceed 4 inches application thickness for closed cell foam for each layer. Allow at least twenty minutes between each pass to allow for cooling. Multiple layers can be applied to reach the desired thickness and R-value.

As with all Spray Polyurethane Foam systems, proper application techniques must be followed. Examples of improper techniques include, but are not limited to, excessive thickness of SPF, off ratio material and spraying into or under rising foam. Potential results of improperly installed SPF include dangerously high reaction temperatures that may result in fire and offensive odors that may or may not dissipate. Improperly installed foam must be removed and replaced with properly installed SPF.

Foam insulation is combustible. Heat sources such as cutting torches, space heaters and welders must not be used in close proximity to any foam.

FINISHED FOAM PROTECTION
The finished surface of the sprayed polyurethane foam should be protected from sunlight and ultraviolet rays, which can cause dusting and discoloration. Protective coatings designed for use with polyurethane foams are available from Quadrant Urethane Technologies.

HEALTH & SAFETY
Due to the reactive nature of these components, vapors and liquid aerosols present during application and for a short period thereafter must be considered - and appropriate protective measures taken - to minimize potential risks from overexposure through inhalation, skin, or eye contact. These protective measures include: adequate ventilation, safety training for installers and other workers, use of appropriate personal protective equipment, and a medical surveillance program. All OSHA, NIOSH and other regulations (as applicable) must be followed. See our website and MSDS for more information.

QuadFoam® RetroSeal® 2.0 is 100% water-blown and therefore contains no ozone depleting blowing agents. It is also PBDE-free. Proper handling and use is required to avoid exposure to reactive chemicals in their unreacted state. For more information, contact Spray Polyurethane Foam Alliance or the American Chemistry Council. Newly insulated areas have been shown to be safe for occupancy 24 hours after installation is complete.

PLASTIC PIPING
QuadFoam® RetroSeal® 2.0 is compatible in direct contact with CPVC piping systems, as per Paschal Engineering Study for the Spray Polyurethane Foam Alliance.

BUILDING CODES
Building codes require the installation of an approved thermal and or ignition barrier between the foam insulation and the occupied space, such as ½-inch gypsum board or other tested and approved materials. Refer to specific building codes for details.

RELATED REFERENCES
All physical properties were determined through testing by accredited third party agencies. Quadrant Urethane Technologies reserves the right to change specifications in its effort of continuous improvement. Please confirm that technical data literature is current.

The information herein is to assist customers in determining whether our products are suitable for their applications. The Customer assumes full responsibility for quality control, testing, and determination of suitability of product for its intended use or application. Quadrant Urethane Technologies warrants only that the material shall meet its specifications; this warranty is in lieu of all other written, expressed or implied warranties and Quadrant Urethane Technologies expressly disclaims any warranty of merchantability or fitness for a particular purpose. Accordingly, buyer assumes all risks whatsoever as to the use of the material. Buyer’s exclusive remedy as to any breach of warranty, negligence or other claim shall be limited to the purchase price of the material. Failure to adhere to any recommended procedures shall relieve Quadrant Urethane Technologies of all liability with respect to the material or the use thereof.

QuadFoam® RetroSeal® 2.0
TECHNICAL DATA

QuadFoam® 2.0
APPROVED APPLICATIONS

- 1ST LAYER: Insulation for residential applications such as homes, garages, and basements.
- 2ND LAYER: Insulation for commercial applications such as warehouses, industrial buildings, and public spaces.
- 3RD LAYER: Insulation for applications requiring higher R-value such as commercial buildings and public spaces.

EQUIPMENT AND COMPONENT RATIOS

- Mix ratio: 1 to 1 by volume.
- Spray pattern: 1-2 inches.
- Spray rate: 2-3 square feet per minute.

APPLICATION GUIDELINES

- Surface preparation: Surfaces must be clean, dry, and free of oil, grease, dust, and other contaminants.
- Application temperature: 55-120°F.
- Application thickness: 1-2 inches per layer.
- Allow at least 20 minutes between each pass to allow for cooling.

FINISHED FOAM PROTECTION

- The finished surface of the sprayed polyurethane foam should be protected from sunlight and ultraviolet rays, which can cause dusting and discoloration.

HEALTH & SAFETY

- Due to the reactive nature of these components, vapors and liquid aerosols present during application and for a short period thereafter must be considered - and appropriate protective measures taken - to minimize potential risks from overexposure through inhalation, skin, or eye contact.

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